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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
1403-9 PCT US (OPP 061165 US)

Application Number	Filed
10/583,593	April 2, 2007

First Named Inventor
LEE, Yu-Ro et al.

Art Unit	Examiner
2611	Nguyen, Leon Viet Q

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- ☑ attorney or agent of record. Registration number 33,494
- ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

Paul J. Farrell
Typed or printed name

516-228-3565
Telephone number

3-8-10
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

PATENT APPLICATION
Attorney Docket No.: 1403-9 PCT (OPP 061165 US)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Lee, Yu-Ro et al. **GROUP ART UNIT:** 2611

APPLICATION NO.:10/583,593 **EXAMINER:** NGUYEN, LEON VIET Q

FILING DATE: April 2, 2007 **DATED:** March 8, 2010

FOR: **METHOD FOR ALLOCATING DATA AND PILOTS, AND TRANSMITTING METHOD AND DEVICE AND RECEIVING METHOD AND DEVICE USING THE SAME IN ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS SYSTEM**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

In response to the Final Office Action and the Advisory Action dated, November 6, 2009 and February 18, 2010, respectively, in connection with the above-identified application, please consider the following remarks.

REMARKS

Reconsideration of this application is respectfully requested.

Claims 1-3, 5-13 and 15-23 are currently pending, with Claims 1, 10, 15, 20 and 23 being independent. It is gratefully acknowledged that the Examiner has allowed Claims 20-23 and has found allowable subject matter in dependent Claims 5, 6, 8 and 9.

In the Office Action, the claims are rejected as follows:

Claims 1-3, 7, 10-12 and 15 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hadad* (US 2006/0072678 A1) in view of *Simmonds* (US7, 418,039);

Claims 13 and 16 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hadad* and *Simmonds* in view of *Applicant's Admitted Prior Art (AAPA)*;

Claim 17 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hadad* and *Simmonds* in view of *Laroia et al.* (US 7,397,838);

Claims 18-19 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hadad, Simmonds and Laroia* in view of *AAPA*);

In the Response to Remarks section, the Examiner states that *Simmonds* teaches allocating subcarriers as pilot channels. The pilot channels are interpreted to be groups. The group allocation is based on pilot allocation information, where the pilot allocation information is determined using channel characteristics. The pilot allocation information is interpreted to be a basic pilot pattern and the channel characteristics are interpreted to be specific references. Further, the Examiner states that *Hadad* teaches "wherein the hopping pattern is generated using an RS code with a same length as that of the subchannel, the RS code being allocated to a corresponding base station based on a number of the subcarrier groups, a basic RS code, a group number, and a cell number", as recited Claim 1. However, Applicants disagree.

As indicated above, independent Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Hadad* in view of *Simmonds*. The Examiner asserts that *Hadad* teaches all the recitations

of the Claim 1, except for "partitioning subcarrier groups and symbols from the uplink channels based on a basic pilot pattern generated by a specific reference", which is allegedly taught in *Simmonds*, and the Examiner states that it would have been obvious to combine the teachings of *Simmonds* into the method of *Hadad*.

Regarding the rejection of Claim 1, the Examiner alleges that *Hadad* discloses "wherein the specific subcarrier group is hopped based on a hopping pattern that is generated using an RS code with a same length as that of a subchannel, the RS code being allocated to a corresponding base station based on a number of the subcarrier groups, a basic RS code, a group number, and a cell number," as recited in Claim 1, citing, *inter alia*, paragraphs [0108], [0093]- [0095], [0105], [0091] and [0060] of *Hadad*. Specifically, the Examiner alleges that *Hadad* discloses the RS code being allocated to a corresponding base station based on a cell number, as recited in Claim 1, citing, *inter alia*, paragraphs [0060], based upon the interpretation of assigning each user a different code, which is interpreted to be a cell number. However, upon review of these cited sections of *Hadad*, Applicants believe that there is no portion of these citations, or any other section of *Hadad*, which teaches these recitations of Claim 1. Accordingly, Applicants respectfully believe this allegation by the Examiner is incorrect.

More specifically, *Hadad* discloses a method for assigning subcarriers based on R-S codes to other base stations in such a way that adjacent base stations have different R-S codes, thereby minimizing the number of collision points therebetween. More specifically, *Hadad* merely discloses that subcarriers are divided into 23 carrier groups, called basic groups (in paragraph [0090]), each group contains 23 carriers (in paragraph [0092]) and each cell may allocate different codes to subscribers in its cell, taking into account possible interference to adjacent cells (in paragraph [0060]). However, *Hadad* fails to disclose or suggest "wherein the specific subcarrier group is hopped based on a hopping pattern that is generated using an RS code with a same length as that of a subchannel, the RS code being allocated to a corresponding base station based on a number of the subcarrier groups, a basic RS code, a group number, and a cell number", as recited in Claim 1. That is, a Base Station may allocate different codes to subscribers in its cell, however, different codes are cannot to be interpreted as a cell number.

Therefore, Applicants respectfully submit that the interpretation of *Hadad* asserted by the

Examiner is not supported by the disclosure of *Hadad.*

Further, the Examiner asserts that *Hadad* teaches all the recitations of the Claim 1, except for "partitioning subcarrier groups and symbols from the uplink channels based on a basic pilot pattern generated by a specific reference", which is allegedly taught in *Simmonds,* and that it would have been obvious to combine the teachings of *Simmonds* into the method of *Hadad.* However, Applicants respectfully disagree.

Specifically, the Examiner alleges that *Simmonds* discloses "partitioning subcarrier groups and symbols from the uplink channels based on a basic pilot pattern generated by a specific reference," as recited in Claim 1, citing, *inter alia*, col. 4 lines 37-40, lines 46-48 and 47-49 of *Simmonds*.

More specifically, the Examiner asserts that citing, *inter alia*, col. 4 lines 47-49 of *Simmonds*, "the pilot channels are interpreted to be groups. The group allocation is based on pilot allocation information". However, upon review of these cited sections of *Simmonds*, Applicants believe that there is no portion of these citations, or any other section of *Simmonds,* which teaches these recitations of Claim 1. Accordingly, Applicants respectfully believe this allegation by the Examiner is incorrect. *Simmonds* merely discloses a method for determining pilot allocation information based upon the characteristics of a channel over which a signal is to be transmitted and determining how many pilots are needed and where they are positioned amongst the sub-carriers. The sub-carriers are preferably grouped into groups of sub-carriers having similar coherency. However, *Simmonds* fails to disclose or suggest partitioning subcarrier groups and symbols from the uplink channels based on a basic pilot pattern generated by a specific reference, as recited in Claim 1.

Therefore, Applicants respectfully submit that the interpretation of *Simmonds* asserted by the Examiner is not supported by the disclosure of *Simmonds,* and that *Simmonds* fails to remedy the deficiencies of *Hadad* described above.

Further, the Examiner alleges that it would be obvious to re-allocate the data in step iii) of Claim 1, in Fig. 5 and paragraphs [0109]-[0120] of *Hadad*, and according to pilots taught by col. 4 lines 41-48 and lines 63-67, and col. 5 lines 42-51 of *Simmonds.*

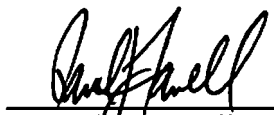
However, upon review of the Fig. 5 and paragraphs [0109]- [0120] of *Hadad*, and col. 4 lines 41-48 and lines 63-67, and col. 5 lines 42-51 of *Simmonds*, it is respectfully submitted that there is no portion of these citations, or any other section of both references, which teaches these recitations of Claim 1. That is, *Hadad* merely discloses a method for assigning subcarriers based on R-S codes to other base stations in such a way that adjacent base stations have different R-S codes, thereby minimizing the number of collision points therebetween. Based at least upon the arguments above, *Simmonds* fails to disclose or suggest partitioning subcarrier groups and symbols from the uplink channels based on a basic pilot pattern generated by a specific reference, as recited in Claim 1. Therefore, Applicants believe Claim 1 is patentable over the combination of *Hadad* and *Simmonds*, as neither of these references, either alone or in combination, teaches, "differently allocating the pilot per subcarrier group based on the basic pilot pattern from the data hopped in step ii)", as recited in Claim 1.

Independent Claims 10 and 15 recite similar features as those discussed above regarding independent Claim 1. Therefore, for the same reasons argued above for Claim 1, Applicants respectfully submit that the Examiner is also incorrect in rejecting Claims 10 and 15.

Without conceding the patentability *per se* of dependent Claims 2-3 and 5-9, 11-14, 16-19 and 21-23, based at least upon their dependence from amended independent Claims 1, 10, 15 and 20, respectively, these claims are likewise believed to be in condition for allowance.

Accordingly, all pending claims, i.e., Claims 1-3 and 5-23 are believed to be in condition for allowance.

Respectfully submitted,



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